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PATIENT-NURSE DEPENDENCY
GENERAL SURGERY

*Issued by the Research and Planning Unit
of the Department of Health
Wellington, New Zealand*



1964



DEPARTMENT OF HEALTH

PATIENT-NURSE DEPENDENCY GENERAL SURGERY

An Analysis of Survey Data from Three Public Hospitals in Christchurch 1962

by

THE RESEARCH AND PLANNING UNIT

(formerly the Operation Research Unit)

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*New Zealand, Dept. of Health
Series.*

SPECIAL REPORT No. 20

*Issued by the Research and Planning Unit
Department of Health, Wellington
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FOREWORD

by Dr H. B. Turbott, I.S.O., M.B., Ch. B., D.P.H.,
Director-General of Health

This report is one of a series concerned with a survey of patient nurse dependency made in three hospitals administered by the North Canterbury Hospital Board by the Operational Research Unit with the active co-operation of the Board.

In general each report covers a clinical specialty. Since it deals with only part of the survey data it is best considered with others in the series. The information in the report is of wide interest and I hope it will help many hospital administrators.

Reports already published have shown the worth of operational research methods in hospital planning and organisation. In this important work of giving the best possible hospital care to all who need it with resources which are often limited, the words of Charles Steinmetz are well understood -

"Co-operation is not a sentiment - it is an economic necessity".

I am pleased to record the helpfulness of the North Canterbury Hospital Board not only in assisting with the survey but also in implementing many of the recommendations.

H. B. Turbott.

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P R E F A C E

This report is one of a series of administrative papers written by the Research and Planning Unit (formerly called the Operational Research Unit) to make recommendations to the North Canterbury Hospital Board and the Department of Health on the provision and organisation of hospital accommodation on the basis of survey data.

It will be well understood by workers in operational research in hospitals that we are indebted to the work of others - the Nuffield Provincial Hospitals Trust, the Operations Research Division of The Johns Hopkins Hospital and the Oxford Regional Hospital Board to name only three. The recording of dependency by day of operation follows work done at Oxford by Jeffery and Barr (unpublished).

We would thank for their co-operation and assistance during the survey, the nurses in charge of wards of Christchurch, Princess Margaret and Burwood Hospitals who daily recorded the patient data and assessed the dependencies; other members of the nursing staffs of the hospitals especially Mrs M.E.F. Chambers, Matron-in-Chief, and Miss J. Taylor and Miss S.C.I. Rolls, Matrons of Princess Margaret and Burwood Hospitals; Dr T. Morton, Medical Superintendent-in-Chief and Dr C. Dick and Dr J. H. McIntyre, Medical Superintendents of Princess Margaret and Burwood Hospitals; Mr J. G. Laurenson, Secretary to the Board and his staff.

The reports were written in consultation with Dr L. M. Berry, Medical Superintendent in Chief, Dr C. G. Riley, Director of Medicine and Mr H.E.H. Denham, Director of Surgery and the report on Paediatrics was written in consultation also with Dr F. T. Shannon, Paediatrician to the Board.

Acknowledgment is made of the help received from Dr R. M. Williams, Director, Applied Mathematics Laboratory and his staff especially with statistical analysis and computer programming and Mr J.P.M. Cornwall, Senior O & M Officer, State Services Commission in the preparation of Reports Nos. 12, 13 and 14.

The Operational Research Unit personnel during the survey were:

Dr I. J. Jeffery,	Physician - Director
Miss Shirley M. Lowe,	Nurse Member
Mr L. V. Chaplin,	Work Study Member
Mr D. Blakeley,	Survey Liaison Officer
Mr C. Gardiner,	Medical Statistician.

It is pleasant to recall the courtesy and co-operation given by the North Canterbury Hospital Board and the staff. The survey was possible only because of this willing assistance and the credit for any worthwhile results which are achieved is due in no small measure to the Board.

9.1 INTRODUCTION

This Part of the report concerns patients who were 13 years of age or over and who were admitted under a consultant surgeon. Unless another meaning is given to it, the expression "Sample" in this Part refers only to these patients.

Data for children up to 13 years of age are analysed in Part 6, "Paediatrics" (Special Report Series No.15) and data for patients who were 65 years of age or over are analysed also in Part 5, "Geriatrics" (Special Report Series No.14).

This Part should be read in conjunction with Parts 1, 2 and 3 which refer generally to the Survey in Christchurch (Special Report Series No.12).

9.2 THE SAMPLE

The Sample is a one-in-three random sample and consists of 424 patients who were in Christchurch, Princess Margaret or Burwood Hospitals at the start of the survey or admitted during it.

The number of patients in hospital at the start of the survey, admitted during the survey, and in hospital at the end of the survey are given by hospital and type of admission in Table 1 and by hospital and ward in Table 2.

The survey covered 88 days for Christchurch Hospital and 86 and 91 days for Princess Margaret and Burwood Hospitals.

9.21 OBSERVATIONS

- (1) The patients were 424 of the 1,565 patients in the complete survey sample.
- (2) Christchurch, Princess Margaret and Burwood Hospitals treated 201, 170 and 53 patients respectively of the sample of 424.
- (3) The patients were observed in 8 wards of Christchurch Hospital, 5 wards of Princess Margaret and 2 wards of Burwood.

9.22 COMMENTS

- (1) The patients were 27.1% of all patients in the complete survey sample.
- (2) Christchurch treated 47.4% of the surgical sample, Princess Margaret 40.1% and Burwood 12.5%.
- (3) The admission rate of the sample during the survey was 528 patients in 88 days for Christchurch and is equivalent to 2,190 patients annually (three times the one-in-three sample). Corresponding annual rates for Princess Margaret and Burwood are 1,897 and 566.
- (4) The corresponding admission rate for the three hospitals taken together is 4,653 patients annually.

9.3 THE PATIENTS

This section analyses data associated with admission and discharge. Where available, the diagnosis on discharge is used. Otherwise, the provisional diagnosis is taken.

9.31 SEX AND AGE-GROUP

The following age-groups are used:-

- (a) 13 - 64 years
- (b) 65 years and over.

The patients are given by sex and age-group for each hospital in Table 3.

9.32 TYPE OF ADMISSION

The numbers of emergency and waiting-list admissions are given by hospital in Table 4 which also gives the number of patients having surgery.

9.33 REASON FOR ADMISSION

The reasons for admission were recorded as:-

- (a) therapy
- (b) for investigation
- (c) infectious
- (d) other.

In the survey "(c) infectious" was used only for patients who were admitted because of an infectious condition.

The number in each group is given by hospital in Table 5.

9.34 PATIENTS HAVING SURGERY

The number of patients having surgery is given for emergency and waiting-list admissions by hospital in Table 4. "Surgery" is defined in Part 2 (Special Report Series No.12).

9.35 DISEASE-GROUP

The number of patients in each of the more commonly occurring disease-groups is given by hospital for emergency and waiting-list admissions in Table 6.

9.36 OBSERVATIONS

- (1) There were 234 males and 190 females in the sample.
- (2) 343 patients were aged 13 to 64 years and 81 were aged 65 years or over.
- (3) Of the 424 admissions, 213 were emergency admissions and 211 were waiting-list.
- (4) Of the 211 waiting-list admissions 97 were male and 114 were female; 178 were aged 13 to 64 years and 33 were aged 65 years or over.
- (5) 320 patients were admitted for therapy, 103 for investigation, none as infectious and one for other.
- (6) 347 were admitted from home and 320 were discharged there; 35 were admitted from and 24 were discharged to another public hospital.
- (7) None were admitted from and one was discharged to a private hospital.
- (8) Two were admitted from and three were discharged to an old peoples home.
- (9) There were 18 deaths and 363 discharges in the sample during the survey period.
- (10) Of the 363 discharges, 111 were referred to their own doctor (other), two were referred to medical social workers and three to district nurses.
- (11) The discharges of eight patients were delayed for social reasons.
- (12) Commonly occurring disease-groups were:-
 - (i) Accidents, poisoning and violence (Code 800 - 999) with 58 patients.
 - (ii) Hernia of abdominal cavity (Code 560 - 561) with 42 patients.
 - (iii) Gall bladder disease (Code 584 - 586) with 41 patients.
 - (iv) Appendicitis (Code 550 - 553) with 39 patients.
 - (v) Diseases of veins and other diseases of the circulatory system (Code 460, 462 - 468) with 37 patients.
 - (vi) Malignant neoplasms (Code 140 - 205) with 33 patients.

- (13) 257 patients had surgery: 83 of them were emergency admissions and 174 were waiting-list.

9.37 COMMENTS

- (1) 55.2% of the patients were male and 44.8% female.
- (2) 80.9% were aged 13 to 64 years and 19.1% were aged 65 years or over.
- (3) 50.2% of the admissions were emergency and 49.8% waiting-list.
- (4) All but one patient were admitted for therapy or for investigation.
- (5) 88.2% of the patients were discharged home.
- (6) 1.4% of the discharges were referred to either a medical social worker or a district nurse.
2.2% of the discharges were delayed for some social reason.
- (7) Commonly occurring disease-groups were, Accidents, poisoning and violence (Code 800 - 999) with 13.7% of the patients, Abdominal Hernia (Code 560 - 561) with 9.9%, Gall bladder disease (Code 584 - 586) with 9.7%, Appendicitis (Code 550 - 553) with 9.2%, Diseases of veins and other diseases of the circulatory system (Code 460, 462 - 468) with 8.7% and Malignant neoplasms (Code 140 - 205) with 7.8%.

9.4 THE LOAD OF PATIENT DAYS

This section deals with the number of days spent in hospital during the survey period by the patients in the sample. The analysis of patient days by dependency is discussed in Sections 9.6 and 9.7.

9.41 HOSPITAL AND WARD

The number of patient days is given by hospital and ward in Table 7.

9.42 SEX AND AGE-GROUP

Patient days are given by sex, age-group and hospital in Table 8.

9.43 TYPE OF ADMISSION

Patient days are given for emergency and waiting list admissions by hospital in Table 9 which also gives the number of patient days for patients having surgery.

9.44 REASON FOR ADMISSION

Patient days are given by reason for admission and hospital in Table 10.

9.45 PATIENTS HAVING SURGERY

Patient days for the patients in the sample who had surgery are given by type of admission and hospital in Table 9. "Surgery" is defined in Part 2 (Special Report Series No.12).

9.46 DISEASE -GROUP

Patient days for the more frequently occurring disease-groups are given by type of admission and hospital in Table 11.

9.47 OBSERVATIONS

- (1) The patients accounted for 4,856 patient days of the 22,875 recorded during the survey period for all patients in the survey.
- (2) Of the 4,856, 2,433 were spent in Christchurch, 1,758 in Princess Margaret and 665 in Burwood.
- (3) Wards in which the patients were treated were notably:-

(a) At Christchurch

- (i) Ward 10 with 839 patient days.
- (ii) Ward 12A with 542.
- (iii) Ward 7 with 464.
- (iv) Ward 8 with 428.

(b) At Princess Margaret

- (i) Ward A4 with 710 patient days.
- (ii) Ward A1 with 601.
- (iii) Ward A2 with 423.

(c) At Burwood

- (i) Ward 5 with 574 patient days.

- (4) Males accounted for 2,684 patient days and females for 2,172.

At Christchurch males accounted for 1,225 patient days and females for 1,208. Corresponding values at Princess Margaret were 1,090 and 668 and at Burwood 369 and 296.

- (5) Patients aged 13 to 64 years accounted for 3,519 days and those aged 65 years of age or over for 1,337.

At Christchurch patients aged 13 to 64 years accounted for 1,786 patient days and those aged 65 years or over for 647. Corresponding values at Princess Margaret were 1,403 and 355 and at Burwood 330 and 335.

- (6) Emergency admissions accounted for 2,318 patient days and waiting-list for 2,538.

At Christchurch emergency admissions accounted for 1,413 patient days and waiting-list for 1,020. Corresponding values at Princess Margaret were 826 and 932 and at Burwood 79 and 586.

- (7) Patients admitted for therapy accounted for 3,855 patient days, for investigation 981 days, as infectious nil days and other for 20 days.

At Christchurch admissions for therapy accounted for 1,751 days and for investigation 682 days and at Princess Margaret therapy accounted for 1,473 days and investigation 285 days. At Burwood therapy accounted for 631 days, investigation for 14 days and as other 20 days.

- (8) Patients having surgery accounted for 3,094 patient days.

- (9) The disease-groups which predominated in contributing patient days were:-

- (a) Malignant neoplasm (Code 140 - 205) with 555 patient days.
- (b) Accidents, poisoning and violence (Code 800 - 999) with 526.
- (c) Gall bladder disease (Code 584 - 586) with 468.
- (d) Hernia of abdominal cavity (Code 560 - 561) with 363.
- (e) Diseases of veins and other diseases of circulatory system (Codes 460, 462 - 468) with 352.
- (f) Diseases of stomach and duodenum (Code 540 - 542) with 343.

9.48 COMMENTS

- (1) The patients accounted for 21.2% of the patient days spent by patients in the survey sample in the three hospitals.
- (2) Christchurch Hospital took 50.1% of the load, Princess Margaret 36.2% and Burwood 13.7%.

- (3) The load at Christchurch is equivalent to 7,299 patient days in 88 days (three times the one-in-three sample). This corresponds to 83.0 beds at 100% occupancy, 92.2 beds at 90% and 97.6 beds at 85%.
- (4) The corresponding beds at Princess Margaret are 61.3, 68.1 and 72.1 beds.
- (5) The corresponding beds at Burwood are 21.9, 24.4 and 25.8.
- (6) The number of equivalent beds for the three hospitals taken together is 166.2 at 100% occupancy, 184.7 at 90% occupancy and 195.5 at 85% occupancy.
- (7) Wards 10, 12A and 7 at Christchurch supplied 839, 542 and 496 patient days respectively. In all, the 3 wards provided 1,877 patient days or 77.1% of the total of 2,433. This is equivalent to 64.0 beds at 100% occupancy.

At Princess Margaret wards A4 with 710 days and A1 with 601 patient days supplied together 74.5% of the total of 1,758. This is equivalent to 45.7 beds at 100% occupancy.

At Burwood ward 5 with 574 patient days supplied 86.3% of the total of 665. This is equivalent to 18.9 beds at 100% occupancy.

- (8) Males accounted for 50.3% of the beds at Christchurch, 62.0% at Princess Margaret and 55.5% at Burwood.
- (9) The 13 to 64 age-group accounted for 73.4% of the beds at Christchurch 79.8% at Princess Margaret, 49.6% at Burwood and 72.5% of all beds.
- (10) Waiting-list admissions accounted for 34.8 equivalent beds at Christchurch, 32.5 at Princess Margaret and 19.3 at Burwood. In all waiting-list admissions accounted for 86.6 beds at 100% occupancy, 96.1 at 90% occupancy and 101.8 beds at 85% occupancy.
- (11) The six most prevalent disease-groups (Table 11) accounted for 53.6% of the total patient days.
- (12) Patients having surgery accounted for 57.9% of the patient days at Christchurch 65.4% at Princess Margaret, 80.6% at Burwood and 63.7% of the total.

9.5 LENGTH OF STAY

This section deals with the overall length of stay recorded for patients in the sample who were discharged or who died during the survey period, or who were still in hospital at the end of the survey.

9.51 DISCHARGES AND DEATHS

During the survey period there were 363 discharges and 18 deaths.

These are given by hospital in Table 2 and the distributions of overall lengths of stay, separately for discharges and deaths in the age-groups 13 to 64 years and 65 years or over, are given in Table 12 and illustrated in Figure 1.

9.52 PATIENTS STILL IN HOSPITAL

The 43 patients who were still in hospital at the end of the survey are given by hospital in Table 2 and the distributions of the numbers of days spent in hospital by them when the survey was completed are given separately for the age-groups 13 to 64 years and 65 years and over in Table 13.

9.53 OBSERVATIONS

- (1) The 381 patients who were discharged or who died during the survey period spent 4,790 days in hospital. The average length of stay was 12.6 days.

The range was 1 to 148 days.

The mode was 9 days with 31 patients, but frequently occurring lengths of stay were 3, 4, 5, 6, 8, and 10 days.

Of the 381 patients, 181 were treated in Christchurch, 154 in Princess Margaret and 46 in Burwood.

317 were aged 13 - 64 years and 64 were aged 65 years or over.

363 had a length of stay of 30 days or under, 14 stayed from 31 to 90 days and 4 stayed over 90 days.

- (2) The 363 discharges spent 4,337 days in hospital.

The average length of stay was 11.9 days.

The range was 1 to 141 days.

The mode was 9 days with 31 patients.

172 were treated in Christchurch, 146 in Princess Margaret and 45 in Burwood.

308 were aged 13 to 64 years and 55 were aged 65 years or over.

350 stayed 30 days or under, 10, 31 to 90 days and 3 over 90 days.

- (3) The 18 patients who died spent 453 days in hospital.

The average length of stay was 25.2 days.

The range was 1 to 148 days.

The mode was 2 days with 3 patients.

9 were treated in Christchurch, 8 in Princess Margaret and 1 in Burwood.

9 were aged 13 to 64 years and 9 were aged 65 years or over.

13 stayed 30 days or under, 4, 31 to 90 days and 1 over 90 days.

- (4) The 43 patients who were still in hospital at the end of the survey spent 1,064 days in hospital.

The average time in hospital was 24.7 days.

26 of them were aged 13 to 64 years and 17 were aged 65 years or over.

Of the 26 who were 13 to 64 years, 19 had been in hospital 30 days or under, 7, 31 to 90 days and none over 90 days.

The average length of stay was 20.3 days.

The range was 2 to 68 days.

Of the 17 who were 65 years of age or over, 14 had been in hospital 30 days or under, 1, 31 to 90 days and 2 over 90 days.

The average length of stay was 31.5 days

The range was 1 to 171 days.

9.54 COMMENTS

- (1) 47.5% of the discharges and deaths were recorded in Christchurch, 40.4% in Princess Margaret and 12.1% in Burwood.

95.3% of them had a length of stay not greater than 30 days, 3.7% stayed 31 to 90 days and 1.0% stayed over 90 days.

- (2) 47.4% of the discharges were recorded in Christchurch, 40.2% in Princess Margaret, and 12.4% in Burwood.

96.4% of these had a length of stay not greater than 30 days, 2.8% stayed 31 to 90 days and 0.8% stayed over 90 days.

- (3) 50.0% of the deaths were recorded in Christchurch, 44.4% in Princess Margaret and 5.6% in Burwood.

72.2% of these had a length of stay not greater than 30 days, 22.2% stayed 31 to 90 days and 5.6% stayed over 90 days.

- (4) Of the patients still in hospital 46.5% were in Christchurch, 37.2% in Princess Margaret and 16.3% in Burwood.
- (5) 1.0% of the discharges and deaths and 4.7% of the patients still in hospital stayed more than 90 days. Of these long-stay patients, 5 were in Christchurch, none in Princess Margaret and 1 in Burwood.
- (6) The long-stay patients, (i.e. patients with a length of stay of over 90 days), who were aged 65 years or over, have been considered also in the report dealing with geriatrics.
- (7) Further comments involving length of stay are made in Section 9.7.

9.6 PATIENT DEPENDENCY

This section deals with the daily dependency of the sample. The definitions of the four dependency categories are given in Part 2 (Special Report Series No.12).

9.61 ADMISSION AND DISCHARGE

The dependencies on admission are given for patients in the sample admitted during the survey period by type of admission and hospital in Table 14. Similar data for discharges are given in Table 15.

9.62 PRE-OPERATION DEPENDENCY

For patients admitted during the survey period and having surgery, the number of days spent in hospital before operation can be obtained from Table 16 which gives the numbers of emergency and waiting-list patients with a day of operation on the given recorded day. A frequency distribution of the number of days spent continuously in Dependency Category 1 before surgery is given for these patients by type of admission in Table 17.

9.63 POST-OPERATION DEPENDENCY

A frequency distribution of the number of days spent in hospital after operation by patients who were discharged and who had surgery during the survey is given by type of admission in Table 18.

A frequency distribution of the number of days spent by these patients continuously in Dependency Category 1 before discharge is given in Table 19 and a similar distribution of the number of days spent continuously in Category 2 before discharge or before becoming Category 1 is given in Table 20.

9.64 VARICOSE VEINS OF LOWER EXTREMITIES, ACUTE APPENDICITIS AND HERNIA OF ABDOMINAL CAVITY

The dependency histories of patients discharged during the survey period with one of three diagnoses have been further studied. The diagnoses are those more frequently occurring and for which lengths of stay for several hospitals for previous years are available. The diagnoses are "varicose veins of lower extremities (Code 460)", "appendicitis (Code 550)" and "hernia of abdominal cavity (Code 560)". The dependency histories are given respectively in Tables 21, 22 and 23. Patients who were in hospital at the start of the survey have dependencies shown for the recorded days.

9.65 DAY OF WEEK

Mean values for the number of patients in each dependency category for each day of the week are given in Table 24.

These mean values are the means of three times the one-in-three sample values. Care should be taken, therefore, in comparing the values in this table with those given for the sample only.

9.66 OBSERVATIONS

- (1) Of the 372 patients admitted during the survey, 15 were in Category 4 on admission, 66 were in Category 3, 87 in Category 2 and 204 in Category 1.
- (2) In the case of the 190 emergency admissions 114 were in Category 1 or 2.
- (3) Of the 363 patients discharged during the survey, 293 were in Category 1, 62 in Category 2, 7 in Category 3 and 1 in Category 4.
- (4) The number of pre-operation recorded days ranged from 0, i.e. surgery within 24 hours of admission, to 18 for emergency admissions and from 0 to 14 for waiting-list.

The mode for emergency admissions was 0 days (44 patients out of 67).

The mode for waiting-list admissions was 2 days, i.e. surgery between 48 and 72 hours after admission (85 patients out of 144).

- (5) In the pre-operation period 8 of 46 emergency patients and 102 of 304 waiting-list patients spent 1 or 2 days in Category 1.

- (6) Post-operation recorded days ranged from 1 to 34 days.

The mode for emergency patients was 6 days (10 patients out of 69). Nineteen patients spent either 6 or 7 days.

The modes for waiting-list patients were 6 and 8 days (17 patients each out of 141). Fifty patients spent 6, 7 or 8 days.

- (7) The number of recorded days post-operation spent continuously in Category 1 before discharge ranged from 0 to 15 for emergency patients and 0 to 27 for waiting-list.

- (8) The range of days spent post-operation continuously in Category 2 before discharge or becoming Category 1 was 0 to 21 for emergency patients and 0 to 15 for waiting-list.

- (9) (a) In the case of patients with the diagnosis of "varicose veins of lower extremities (Code 460)" -

- (i) The pre-operation period ranged from 0 to 4 days, with a mode of 2 days (18 patients out of 26).

- (ii) The post-operation period ranged from 3 to 13 days, with modes of 6 and 8 days (7 patients each out of 26); 19 patients had a post-operation period of 6, 7 or 8 days.

- (b) In the case of patients with the diagnosis of "acute appendicitis (Code 550)" -

- (i) The pre-operation period ranged from 0 to 1 day, with a mode of 0 days (14 out of 15 patients).

- (ii) The post-operation period ranged from 3 to 8 days, with a mode of 7 days (6 out of 15 patients); 5 patients had a post-operation period of 6 days and 13 of the 15 patients had a post-operation period of 5, 6 or 7 days.

- (c) In the case of patients with the diagnosis of "hernia of abdominal cavity (Code 560)" -

- (i) The pre-operation period ranged from 0 to 3 days, with a mode of 2 days (16 patients out of 20).

- (ii) The post-operation period ranged from 4 to 25 days, with a mode of 7 days (7 patients out of 20); 5 patients had a post-operation period of 8 days and 15 of the 20 patients had a post-operation period of 6, 7 or 8 days.

- (d) The dependency histories of Tables 21, 22 and 23 are discussed in Section 9.76.

9.67 COMMENTS

- (1) 4% of the patients were admitted in the most dependent category, Category 4. Over 22% of the emergency patients were in Category 1 on admission.
- (2) Over 80% of the patients discharged were in Category 1, 17% were in Category 2 and under 2% in Category 3. The patient who was discharged in Category 4 was transferred to another public hospital.
- (3) Customarily, waiting-list patients spent 2 days in Category 1 before operation. The point is discussed in Section 9.7.
- (4) 85.1% of waiting-list patients having surgery spent some period post-operatively in Category 1 and 71.6% spent more than 1 day.

The possibility of discharging a patient earlier in the course of a progressive recovery is discussed in Section 9.7.

- (5) In many cases the nursing care given to patients in Category 2 was of the type generally referred to as "convalescent" in as much as no item of special nursing care was given to them.

(6) Further discussion relating to dependency is made in Section 9.7.

9.7 DISCUSSION

This section deals with subjects which are more appropriately grouped together following the previous sections.

9.71 PERCENTAGE OCCUPANCY

The number of beds occupied by patients admitted under the care of a consultant surgeon is variable and an accurate percentage occupancy by hospital is not ascertainable. In general an 85% occupancy is assumed but some values which are influenced by percentage occupancy, e.g. equivalent beds, are generally discussed for 90% and 85% occupancies. Corresponding magnitudes for another value of the percentage occupancy are of course readily able to be obtained.

9.72 EQUIVALENT BEDS

During the survey general surgical patients used the equivalent of 166.2 beds at 100% occupancy or 195.5 beds at 85%. Table 25 shows how the beds are apportionable between emergency and waiting-list admissions and gives a value of 101.8 beds at 85% occupancy for waiting-list patients which will be used below.

9.73 BED TURNOVER

The 381 discharges and deaths occurring during the survey period corresponded to a discharge rate of 4,768 per year. For 195.5 beds the resultant bed turnover was 24.4 patients per bed per year. The 101.8 beds regarded as serving waiting-list patients had a bed turnover of 23.4 patients per bed per year.

9.74 THE WAITING-LIST

At the start of the survey in June 1962 there were 610 names on the waiting-list which over the period June 1962 to January 1963 increased to 856 names. The list was then culled and at November 1963 there were 833 names on it.

If this is assumed as the true waiting-list demand and if the number of children on the waiting-list is ignored, (there were 10 children under 13 years of age on the waiting-list at June 1962 and none at January 1963) the position can be stated as follows:-

- (a) Allowing for a period of re-assessment the waiting-list has been assumed to increase at a mean rate of say 30 names monthly or 360 annually.
- (b) The annual rate observed during the survey for discharges and deaths of waiting-list patients was 2,381.
- (c) In a year 2,741 persons were recommended for admission, (2,381 plus 360).
- (d) By March 1964 there would be say 950 names on the list but if admissions were arranged more or less in rotation, no one would wait more than 4 - 5 months for admission.
- (e) At a bed turnover of 23.4 patients per bed per year (Section 9.73) 38.5 bed years at 90% occupancy or 40.6 beds at 85% occupancy are required to clear the list of 950 persons. This means that the list could be cleared by making available say a further 40 beds for 1 year or 20 beds for 2 years and so on assuming that other services were available.

The growth in the waiting-list could be checked by providing a permanent additional 14.5 beds used at 90% occupancy or 15.4 beds used at 85% occupancy assuming that the conditions operating during the survey continue to apply.

The number of beds required is further discussed in Section 9.76.

9.75 THE PATTERN OF CARE

In specialities such as the one with which this report is concerned, where the incidence of patients having surgery is high, it is useful to consider the in-patient stay of a patient having surgery in three periods, viz. a pre-operation period in which the patient is often in a less dependent state, a period of high or full dependency after surgery and a period of recovery with diminishing dependency. This follows a model which is being developed along the lines of Jeffery and Barr at Oxford (unpublished).

During this third period, patients occupy beds in an acute hospital although in general they are much less dependent upon the nursing staff and the expensive services there. The possibility of discharging some of them at this stage should be considered, therefore, and if discharge is not desirable, the possibility of transferring them to "convalescent" beds in a less expensive establishment should be examined. By "convalescent care" is meant that kind of care which is variously described as "intermediate care" or "pre-convalescent care" rather than self-care". Data from the survey support both propositions on the grounds that:-

- (a) In Category 1 and often in Category 2, the patient is receiving little in the way of nursing care and
- (b) The risk of regression is slight.

On the first point, the definitions of dependency categories are given in Part 2 of the full report (Special Report Series No. 12) but the characteristics of Category 1 and Category 2 are as follows:-

In Category 1 the patient generally is independent for walking, feeding, bathing and eliminating, is not receiving any item of special nursing care and is up for at least 4 hours a day.

In Category 2 the patient is partly dependent, is receiving some item of nursing care and may be up for part of the day. He is not generally receiving any of the special services associated with an acute hospital however, and may be discharged in this category.

A review of each surgical patient's history in the survey confirms that generally, patients in Category 1 or 2 received little nursing care of the kind associated with an acute bed.

On the second point - the danger of regression - for the patients with some post-operation period within the survey period there were 4 cases of regression in the post-operation period.

The details of the regressions in the categories are:-

- (a) From 1, 2 or 3 to 4 - Nil
- (b) From 1 to 3 - Nil
- (c) From 1 to 2 - 1 patient
- (d) From 2 - 3 - 3 patients.

On these data for the post-operation period there is little danger of regression to Category 4 or from Category 1 to Category 3. There is a 1 in 210 chance of regression from Category 1 to Category 2 and a 1 in 70 chance of regression from Category 2 to Category 3.

The need for a consultant to regard each patient individually to be transferred or discharged only on that patient's requirements for nursing care is fully supported. Epidemiologically, however, there is a strong case for proposing that the average length of stay for the patients under discussion could be decreased without hurt to the patients. The proposal is developed in Section 9.76.

9.76 BEDS REQUIRED

In assessing the number of beds required a difficulty lies in deciding when a patient is convalescent or ready for discharge. Nevertheless, dependency categories such as those used in the survey seem to provide a useful guide on the point. The survey recorded the daily needs of the patients as well as their daily dependencies. A review of the data supports that, having regard to what is meant by "convalescent" in this context, (see Section 9.75) epidemiologically, patients may be regarded as "convalescent" after spending four days in Category 2 in the course of a progressive recovery. Although it is known that patients remain in hospital for the removal of sutures or clips there is seldom a clinical item recorded which would indicate that a patient could not be discharged after spending one day in Category 1 during this progressive recovery.

It is hoped to assess these landmarks in the hospital stay more accurately by further study. In the recorded data there was an apparent tendency to overstate the number of days spent post-operatively in Category 1 and although overt cases have been corrected the final number of such days could still be overstated.

It is emphasised that a patient may properly be in hospital in Category 1 and in the case of patients in the post-operation period particularly, there are reasons other than those recorded in the survey for the continued stay of patients in low dependency states. Nevertheless the components of the patients stay in hospital are such as to raise the question as to the necessity for the time spent in the pre-operation period in Category 1 and in the post-operation period in Category 1.

The relative magnitudes of the five given periods in the hospital stay in Table 26 illustrate the point. All patient days for the sample are included in the table. The following arrangement of days has been used:-

- (a) All patient days for patients dying in the survey period have been regarded as "acute".
- (b) Patient days for patients having an operation have been allocated in the relevant periods. The fourth day in Category 2 refers to the sequence of days in Category 2 after which there was no regression of dependency.
- (c) Patients not having an operation have been treated similarly to patients in (b). The division into pre- and post-operation periods does not, of course apply to these patients.
- (d) Patients in hospital at the end of the survey have been assumed not to experience regression thereafter (see Section 9.75).

The following observations and comments are made:-

- (a) The patient days immediately following admission spent continuously in periods in excess of one day in Category 1 were 5.9% of all patient days.
- (b) The more dependent or "acute" periods of stay occupied 53.4% of the total.
- (c) The remaining 40.7% of the total days were "convalescent" in type and 21.0% of the total time was spent in periods in Category 1 in excess of one day in the course of a progressive recovery before discharge, or in the course of an apparent progressive recovery in the case of patients still in hospital.

On the face of it, 26.9% (21.0% plus 5.9%) of the total time appears available at the two ends of the patients stay for shortening the stay and consequently reducing the waiting-list time for admission. To compensate for the observed tendency to over-record the number of days in Category 1 mentioned earlier, the number of days spent before discharge in Category 1 in excess of two might be considered, in which case the 26.9% is reduced to 17.5% and it is recommended that a reduction of this order be attempted.

To test the practicability of such a reduction a 17.5% reduction in the length of stay has been applied to the patients listed in Tables 21, 22 and 23. The average length of stay for the conditions, varicose veins of the lower limb (Code 460), appendicitis (Code 550) and abdominal hernia (Code 560) become 8.6, 9.6 and 6.1 days respectively and on the day of discharge:-

- (a) Of the 26 patients with varicose veins of the lower limb, 15 would be in Category 1, 7 would be in Category 2 and 4 would be already discharged.
- (b) Of the 15 patients with appendicitis, 11 would be in Category 1, 3 would be in Category 2 and 1 would be already discharged.
- (c) Of the 20 patients with abdominal hernia 11 would be in Category 1, 3 would be in Category 2, 1 would be having a further operation and 5 would be already discharged.

It is assumed that consultant, nursing and other services could be increased as necessary to make use of the beds which would become available if a reduction in length of stay were achieved. The survey of course, throws no light on whether these services could be augmented in this way.

A decision to transfer or discharge a patient in light of the dependency history rests upon a knowledge of the patients daily progress through the categories. A record of the appropriate dependency category and the items of nursing care given to the patient each day would materially assist those making such a decision. The use of a suitable record is recommended.

9.77 PREDICTION OF DEMAND

Many factors enter into the prediction of the number of surgical beds which will be required in public hospitals in Christchurch. Nevertheless the survey provides a basis for assessing the number of beds needed if it is assumed that:-

- (a) Private hospitals maintain the present proportion of surgical work.
- (b) Consultant, nursing and other services are expanded to match the availability of beds.
- (c) There will be no significant change in the age and sex distributions of persons over 12 years of age in the predicted populations or in the incidence and treatment of patients admitted to a public hospital under a consultant surgeon.

The hospitals surveyed may be considered to have served a population of 274,000 during the survey period. The general surgical load as then organised could be met by 195.5 beds at 85% occupancy with a further 15.4 beds at 85% occupancy to meet the growth in the waiting-list i.e. 210.9 beds or 77.0 beds per 100,000 population.

Using this rate with the Ministry of Works population predictions for the years below and maintaining the ratio of acute to convalescent beds given in Table 26, future needs would be approximately:-

YEAR	POPULATION (Thousands)	BEDS REQUIRED		
		ACUTE	CONVALESCENT	ALL
1966	300.7	124	108	232
1971	337.2	139	121	260
1981	419.7	173	150	323

If the 17.5% reduction were achieved the rate would be 63.5 beds per 100,000 population (at 85% occupancy) and the beds predicted:-

YEAR	POPULATION (Thousands)	BEDS REQUIRED		
		ACUTE	CONVALESCENT	ALL
1966	300.7	124	67	191
1971	337.2	139	75	214
1981	419.7	173	94	267

It is recommended that the Board plan for the number of beds needed in 1981 and that 173 acute beds and 94 convalescent beds be accepted as this requirement. The convalescent beds can be considered as part of the total required by patients in a number of specialities.

9.8 CONCLUSION AND RECOMMENDATIONS

This report attempts to assess the dependency of patients admitted to hospital under a consultant general surgeon upon the ward nursing staff and upon some ward services. As in the reports dealing with other specialities there is seen the difficulty in deciding when a patient should leave hospital. It is stressed that this decision is one properly to be made by the medical practitioner responsible for the patients care. This study, which is an epidemiological one, however, contains data which can assist in this and other decisions. In line with the comments and discussion in the report it is recommended that the Board -

- (1) admit waiting-list patients generally one day before operation;
- (2) discharge sooner patients in the lowest dependency state;
- (3) use convalescent accommodation for patients no longer in need of acute accommodation;
- (4) introduce a system of recording progressively a patients state of dependency to assist consultants in discharging or transferring patients;
- (5) provide some 173 acute beds and 94 convalescent beds in public hospitals in Christchurch to serve patients admitted under consultant general surgeons until 1981;
- (6) use the survey data to assist in planning and designing the wards.

TABLE 1 PATIENTS IN HOSPITAL AT THE START OF THE SURVEY, ADMITTED DURING THE SURVEY, AND IN HOSPITAL AT THE END OF THE SURVEY, BY HOSPITAL AND TYPE OF ADMISSION

HOSPITAL	NUMBER OF PATIENTS											
	At start of Survey			Admitted during Survey			At end of Survey			ALL		
	E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.	ALL
Christchurch	13	12	25	107	69	176	13	7	20	120	81	201
Princess Margaret	9	12	21	80	69	149	9	7	16	89	81	170
Burwood	1	5	6	3	44	47	-	7	7	4	49	53
ALL	23	29	52	190	182	372	22	21	43	213	211	424

TABLE 2 PATIENTS IN HOSPITAL AT THE START OF THE SURVEY, ADMITTED DURING THE SURVEY AND IN HOSPITAL AT THE END OF THE SURVEY, BY HOSPITAL AND WARD

HOSPITAL AND WARD*	NUMBER OF PATIENTS					
	AT START	ADMITTED	DISCHARGED	DIED	STILL IN	ALL
Christchurch						
2	-	1	1	-	-	1
7	4	47	41	2	8	51
8	4	38	38	2	2	42
10	10	58	62	-	6	68
11	-	1	1	-	-	1
12A	5	20	19	2	4	25
13A	2	7	9	-	-	9
Recovery	-	4	1	3	-	4
All	25	176	172	9	20	201
Princess Margaret						
A1	7	54	54	-	7	61
A2	6	30	29	3	4	36
A3	-	2	2	-	-	2
A4	8	62	61	4	5	70
Recovery	-	1	-	1	-	1
All	21	149	146	8	16	170
Burwood						
5	5	47	45	1	6	52
6	1	-	-	-	1	1
All	6	47	45	1	7	53
ALL	52	372	363	18	43	424

* Ward is ward of discharge.

TABLE 3 PATIENTS BY SEX, AGE-GROUP AND HOSPITAL

AGE-GROUP (YEARS)	HOSPITAL											
	CHRISTCHURCH			PRINCESS MARGARET			BURWOOD			ALL		
	M.	F.	ALL	M.	F.	ALL	M.	F.	ALL	M.	F.	ALL
13 - 64	90	74	164	79	62	141	15	23	38	184	159	343
65 and over	23	14	37	18	11	29	9	6	15	50	31	81
ALL	113	88	201	97	73	170	24	29	53	234	190	424

TABLE 4 PATIENTS BY TYPE OF ADMISSION, HAVING SURGERY AND HOSPITAL

HOSPITAL	HAVING SURGERY	TYPE OF ADMISSION		
		EMERGENCY	WAITING-LIST	ALL
Christchurch	Yes	48	66	114
	No	72	15	87
	All	120	81	201
Princess Margaret	Yes	33	69	102
	No	56	12	68
	All	89	81	170
Burwood	Yes	2	39	41
	No	2	10	12
	All	4	49	53
ALL	Yes	83	174	257
	No	130	37	167
	ALL	213	211	424

TABLE 5 PATIENTS BY REASON FOR ADMISSION AND HOSPITAL

HOSPITAL	REASON FOR ADMISSION			
	THERAPY	INVESTIGATION	INFECTIOUS	OTHER
Christchurch	139	62	-	-
Princess Margaret	130	40	-	-
Burwood	51	1	-	1
ALL	320	103	-	1

TABLE 6 PATIENTS BY DISEASE-GROUP, HOSPITAL AND TYPE OF ADMISSION

DISEASE-GROUP		HOSPITAL									
		CHRISTCHURCH		PRINCESS MARGARET		BURWOOD		ALL		%	
		E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.		
CODE NOS.	DESCRIPTION									NO.	ALL
800 - 990	Accidents, poisoning, violence	31	-	31	24	-	24	3	3	55	13.7
560 - 561	Abdominal hernia	2	12	15	2	14	16	-	11	5	9.9
584 - 586	Gall bladder disease	8	6	14	6	12	18	-	9	14	9.7
550 - 553	Appendicitis	16	2	18	13	1	14	1	6	30	9.2
460, 462-468	Diseases of veins and circulatory system	-	14	14	2	14	16	1	6	3	8.7
140 - 205	Malignant neoplasms	7	9	16	6	10	16	-	1	13	7.8
570, 572-578	Other diseases of intestines and peritoneum	10	7	17	4	1	5	1	1	15	5.7
540 - 542	Diseases of the stomach and duodenum	6	4	10	11	1	12	-	1	17	5.4
780 - 795	Symptoms, ill-defined conditions	11	-	11	2	1	3	-	1	13	3.5
450 - 456	Diseases of arteries	-	-	-	4	6	10	-	2	4	2.8
690 - 698	Infections of skin, subcutaneous tissue	8	-	8	1	-	1	-	1	9	2.4
510 - 527	Other respiratory system diseases	1	6	7	1	1	2	-	-	2	2.1
210 - 239	Benign neoplasms, unspecified neoplasms	2	5	7	-	1	1	-	1	2	2.1
Remainder		17	16	33	13	19	32	1	6	31	17.0
ALL	ALL	120	81	201	89	81	170	4	49	213	100.0

TABLE 7 PATIENT DAYS BY HOSPITAL AND WARD. NUMBER AND PERCENTAGE

HOSPITAL	WARD	PATIENT DAYS	
		NUMBER	PERCENTAGE
Christchurch	2	13	.3
	7	496	10.2
	8	428	8.8
	10	839	17.3
	11	5	.1
	12A	542	11.2
	13A	103	2.1
	Recovery	7	.1
	All	2,433	50.1
Princess Margaret	A1	601	12.4
	A2	423	8.7
	A3	9	.2
	A4	710	14.6
	Recovery	15	.3
	All	1,758	36.2
Burwood	5	574	11.8
	6	91	1.9
	All	665	13.7
ALL	ALL	4,856	100

TABLE 8 PATIENT DAYS BY SEX, AGE-GROUP AND HOSPITAL

AGE-GROUP (YEARS)	HOSPITAL											
	CHRISTCHURCH			PRINCESS MARGARET			BURWOOD			ALL		
	M.	F.	ALL	M.	F.	ALL	M.	F.	ALL	M.	F.	ALL
13 - 64	915	871	1786	804	599	1403	151	179	330	1870	1649	3519
65 and over	310	337	647	286	69	355	218	117	335	814	523	1337
ALL	1225	1208	2433	1090	668	1758	369	296	665	2684	2172	4856

TABLE 9 PATIENT DAYS BY TYPE OF ADMISSION, HAVING SURGERY AND HOSPITAL

HOSPITAL	HAVING SURGERY	TYPE OF ADMISSION		
		EMERGENCY	WAITING-LIST	ALL
Christchurch	Yes	666	743	1,409
	No	747	277	1,024
	All	1,413	1,020	2,433
Princess Margaret	Yes	363	786	1,149
	No	463	146	609
	All	826	932	1,758
Burwood	Yes	42	494	536
	No	37	92	129
	All	79	586	665
ALL	Yes	1,071	2,023	3,094
	No	1,247	515	1,762
	ALL	2,318	2,538	4,856

TABLE 10 PATIENT DAYS BY REASON FOR ADMISSION AND HOSPITAL

HOSPITAL	REASON FOR ADMISSION				
	THERAPY	INVESTIGATION	INFECTIOUS	OTHER	ALL
Christchurch	1,751	682	-	-	2,433
Princess Margaret	1,473	285	-	-	1,758
Burwood	631	14	-	20	665
ALL	3,855	981	-	20	4,856

TABLE 11. PATIENT DAYS BY DISEASE-GROUP, HOSPITAL AND TYPE OF ADMISSION

CODE NOS.	DISEASE-GROUP DESCRIPTION	HOSPITAL									
		CHRISTCHURCH			PRINCESS MARGARET			BURWOOD			%
		E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.	ALL	
140 - 205	Malignant neoplasms	149	140	289	84	171	255	-	11	11	11.4
800 - 990	Accidents, poisoning, violence	234	-	234	207	-	207	-	85	85	10.8
584 - 586	Gall bladder diseases	63	73	136	65	134	199	-	133	133	9.6
560 - 561	Abdominal hernia	26	120	146	10	136	146	-	71	71	7.5
460, 462-468	Diseases of the veins and circulatory system	-	119	119	26	132	158	35	40	75	7.2
540 - 542	Diseases of the stomach and duodenum	111	75	186	135	16	151	-	6	6	7.1
570, 572-578	Other diseases of the intestines and peritoneum	191	79	270	29	8	37	14	2	16	6.7
450 - 456	Diseases of arteries	-	-	-	86	89	175	-	111	111	5.9
550 - 553	Appendicitis	90	9	99	85	10	95	7	26	33	4.7
780 - 795	Symptoms, ill-defined conditions	118	-	118	4	28	32	-	20	20	3.5
600 - 609	Other diseases of the urinary system	7	156	163	-	-	-	-	-	-	3.4
712 - 716	Other diseases of skin and subcutaneous tissue	37	55	92	-	6	6	23	-	23	2.5
Remainder		387	194	581	95	202	297	-	81	81	19.7
ALL	ALL	1413	1020	2433	826	932	1758	79	586	665	100.0

TABLE 12 FREQUENCY DISTRIBUTION OF LENGTHS OF STAY FOR DISCHARGES AND DEATHS SEPARATELY BY HOSPITAL AND AGE-GROUP

DISCHARGES		NUMBER OF DAYS IN LENGTH OF STAY																																	
HOSPITAL	AGE-GROUP (YEARS)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	>30	ALL		
		- 10	14	12	8	11	2	9	10	10	11	5	5	5	3	5	4	2	2	2	1	-	1	-	1	1	3	1	1	-	1	-	1	a	7
Christchurch	65 and over	-	1	1	-	1	2	-	-	2	2	2	-	2	1	1	-	1	-	1	1	-	-	1	1	1	1	-	2	1	-	-	b	1	26
	All	-	11	15	12	9	13	2	9	12	12	13	5	7	6	4	5	5	2	3	3	1	1	2	2	4	1	3	1	-	1	8	172		
	Princess Margaret	2	7	11	7	8	10	9	11	11	9	4	7	6	3	3	3	1	1	1	-	2	1	1	1	-	2	1	2	-	-	c	3	127	
Burwood	65 and over	-	-	-	2	2	-	-	2	-	2	1	-	1	-	2	-	1	-	-	-	-	1	1	-	-	1	1	1	-	-	d	1	19	
	All	2	7	11	9	10	10	9	13	11	11	5	7	7	3	5	3	2	1	1	-	2	2	2	1	-	3	2	3	-	-	4	146		
	13 - 64	-	1	1	6	5	1	3	2	5	1	3	1	1	2	-	1	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	35	
ALL	65 and over	-	-	-	-	1	-	-	-	3	-	-	2	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	e	1	10	
	All	-	1	1	6	6	1	3	2	8	1	3	3	1	2	-	1	-	-	1	1	-	-	2	-	-	-	-	-	-	1	1	45		
	13 - 64	2	18	26	25	21	22	14	22	26	20	18	13	12	10	6	9	5	3	4	2	3	1	3	2	3	3	2	2	-	1	10	308		
ALL	65 and over	-	1	1	2	4	2	-	2	5	4	3	2	3	1	3	-	2	-	1	2	-	2	3	1	1	1	3	2	-	1	3	55		
	All	2	19	27	27	25	24	14	24	31	24	21	15	15	11	9	9	7	3	5	4	3	3	3	6	3	4	4	5	4	-	2	13	363	
DEATHS																																			
Christchurch	13 - 64	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	f	1	5	
	65 and over	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	g	1	4	
	All	1	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	2	9		
Princess Margaret	13 - 64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	h	2	4	
	65 and over	-	-	-	1	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
	All	-	-	-	1	2	-	-	-	-	-	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2	8		
Burwood	13 - 64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	65 and over	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	i	1		
	All	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1			
ALL	13 - 64	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	3	9		
	65 and over	-	1	1	1	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	9		
	All	1	3	1	1	2	-	-	-	-	-	-	-	-	1	-	-	2	-	1	-	-	1	-	-	-	-	-	-	-	-	5	18		

a 32, 33, 44, 47, 52, 107, 141
b 102
c 37, 45, 72
d 32
e 49
f 41
g 148
h 35, 42
i 74

TABLE 13 FREQUENCY DISTRIBUTION OF LENGTHS OF STAY FOR PATIENTS STILL IN HOSPITAL AT END OF SURVEY BY HOSPITAL AND AGE-GROUP

HOSPITAL	AGE-GROUP (YEARS)	NUMBER OF DAYS IN LENGTH OF STAY																															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	>30	ALL
Christchurch	13 - 64	-	1	-	-	1	-	-	1	2	1	-	1	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	a 4	13
	65 and over	-	-	-	-	-	-	-	-	4	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	b 1	7	
	All	-	1	-	-	1	-	-	1	2	5	-	1	1	-	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	5	20	
Princess Margaret	13 - 64	-	-	1	-	1	-	-	1	-	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	c 3	10
	65 and over	1	-	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	d 1	6	
	All	1	-	2	-	1	1	1	1	-	-	-	1	1	-	-	1	-	-	-	1	-	-	-	-	1	-	-	-	-	4	16	
Burwood	13 - 64	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3
	65 and over	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	e 1	4	
	All	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	1	-	1	-	1	-	-	-	-	-	-	1	-	-	1	7	
ALL	13 - 64	-	1	1	-	2	-	-	2	2	1	-	3	1	-	1	-	1	1	-	-	-	-	1	-	1	-	1	-	-	-	7	26
	65 and over	1	-	1	-	-	3	1	-	-	4	-	-	1	-	-	-	-	-	1	1	-	1	-	1	-	-	-	-	-	3	17	
	ALL	1	1	2	-	2	3	1	2	2	5	-	3	2	-	1	-	1	1	-	1	1	-	2	-	1	-	1	-	-	10	43	

a 32, 32, 37, 68

b 166

c 33, 44, 50

d 52

e 171

FIGURE 1 FREQUENCY DISTRIBUTIONS OF LENGTHS OF STAY FOR DISCHARGES AND FOR DEATHS

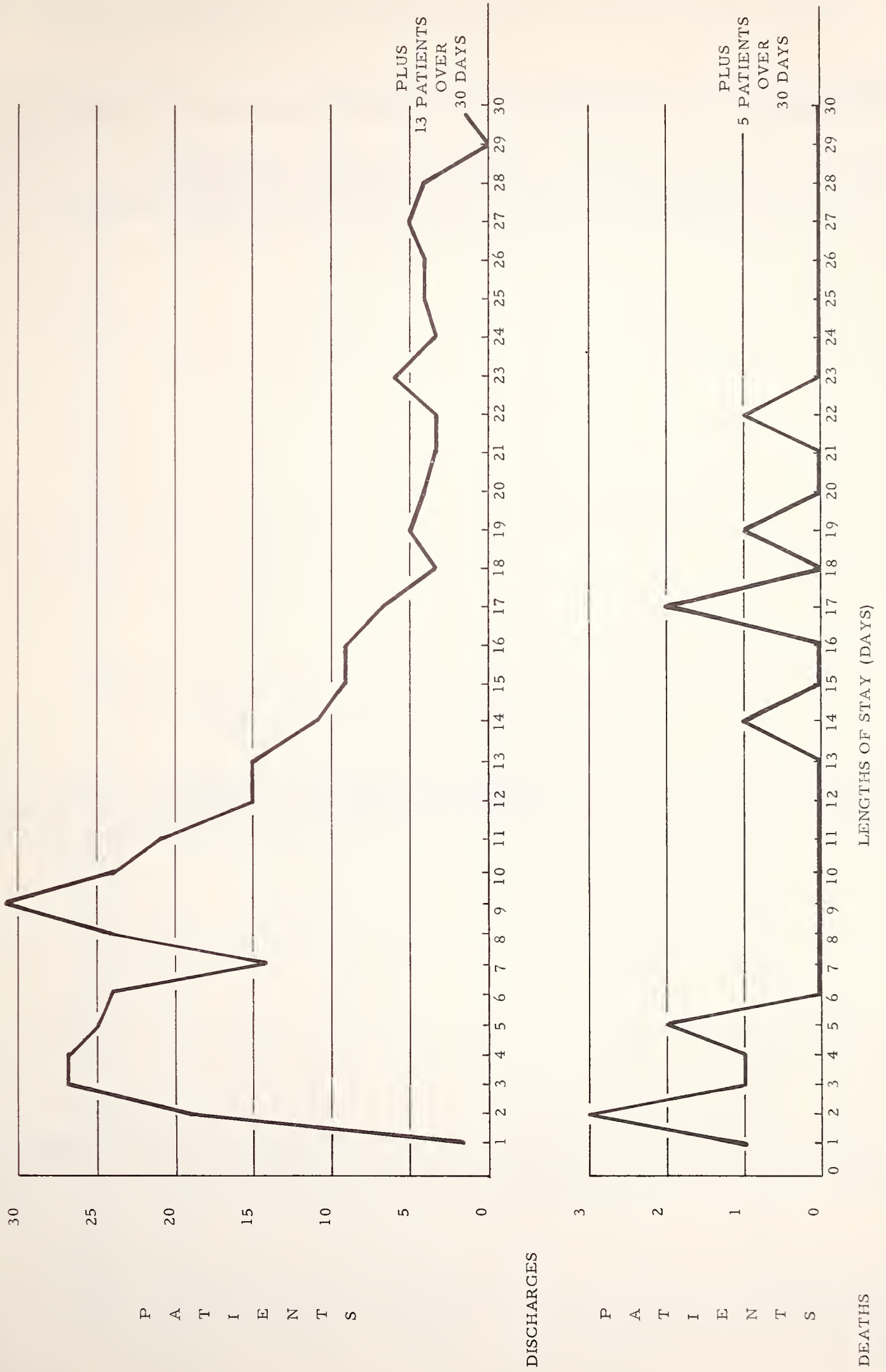


TABLE 14 PATIENT DEPENDENCY ON ADMISSION BY HOSPITAL AND TYPE OF ADMISSION

DEPENDENCY CATEGORY	HOSPITAL AND TYPE OF ADMISSION											
	CHRISTCHURCH			PRINCESS MARGARET			BURWOOD			ALL		
	E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.	ALL
1	24	64	88	17	61	78	1	37	38	42	162	204
2	51	4	55	20	5	25	1	6	7	72	15	87
3	24	1	25	36	3	39	1	1	2	61	5	66
4	8	-	8	7	-	7	-	-	-	15	-	15
ALL	107	69	176	80	69	149	3	44	47	190	182	372

TABLE 15 PATIENT DEPENDENCY ON DISCHARGE BY HOSPITAL AND TYPE OF ADMISSION

DEPENDENCY CATEGORY	HOSPITAL AND TYPE OF ADMISSION											
	CHRISTCHURCH			PRINCESS MARGARET			BURWOOD			ALL		
	E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.	ALL	E.	W.L.	ALL
1	68	52	120	63	65	128	3	42	45	134	159	293
2	26	20	46	8	8	16	-	-	-	34	28	62
3	3	2	5	2	-	2	-	-	-	5	2	7
4	1	-	1	-	-	-	-	-	-	1	-	1
ALL	98	74	172	73	73	146	3	42	45	174	189	363

TABLE 16 NUMBER OF PATIENTS ADMITTED DURING THE SURVEY PERIOD WITH DAY OF FIRST OR ONLY OPERATION ON THE GIVEN RECORDED DAY, BY HOSPITAL AND TYPE OF ADMISSION

HOSPITAL	TYPE OF ADMISSION	RECORDED DAY OF OPERATION																			TOTAL PATIENTS
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Christchurch	Emergency	24	4	2	-	-	1	1	-	1	-	-	-	-	1	-	-	-	1	1	36
	Waiting-list	1	11	36	4	1	-	-	3	1	1	-	1	-	1	-	-	-	-	-	60
	All	25	15	38	4	1	1	1	3	2	1	-	1	-	2	-	-	-	1	1	96
Princess Margaret	Emergency	19	1	2	1	3	2	-	-	1	-	-	-	-	-	1	-	-	-	-	30
	Waiting-list	4	9	38	5	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	62
	All	23	10	40	6	7	4	-	-	1	-	-	-	-	-	1	-	-	-	-	92
Burwood	Emergency	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Waiting-list	4	1	11	6	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	23
	All	5	1	11	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
ALL	Emergency	44	5	4	1	3	3	1	-	2	-	-	-	-	1	1	-	-	1	1	67
	Waiting-list	9	21	85	15	5	2	-	3	1	1	-	1	-	1	1	-	-	-	-	145
	ALL	53	26	89	16	8	5	1	3	3	1	-	1	-	2	2	-	-	1	1	212

TABLE 17 NUMBER OF PATIENTS ADMITTED DURING THE SURVEY PERIOD WITH GIVEN NUMBER OF RECORDED DAYS CONTINUOUSLY IN CATEGORY 1 BEFORE FIRST OR ONLY OPERATION BY HOSPITAL AND TYPE OF ADMISSION

HOSPITAL	TYPE OF ADMISSION	PRE-OPERATION RECORDED DAYS															PATIENT DAYS INVOLVED
		0	1	2	3	4	5	6	7	8	9	10	11	12	13		
Christchurch	Emergency	32	2	-	-	-	-	-	-	-	-	1	-	-	1	25	
	Waiting-list	3	11	35	3	1	-	1	2	1	1	-	1	1	-	143	
	All	35	13	35	3	1	-	1	2	1	1	1	1	1	1	168	
Princess Margaret	Emergency	22	1	5	-	1	-	1	-	-	-	-	-	-	-	21	
	Waiting-list	7	8	36	5	5	1	-	-	-	-	-	-	-	-	120	
	All	29	9	41	5	6	1	1	-	-	-	-	-	-	-	141	
Burwood	Emergency	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Waiting-list	5	1	11	6	-	-	-	-	-	-	-	-	-	-	41	
	All	6	1	11	6	-	-	-	-	-	-	-	-	-	-	41	
ALL	Emergency	55	3	5	-	1	-	1	-	-	-	1	-	-	1	46	
	Waiting-list	15	20	82	14	6	1	1	2	1	1	-	1	1	-	304	
	ALL	70	23	87	14	7	1	2	2	1	1	1	1	1	1	350	

TABLE 18 NUMBER OF PATIENTS DISCHARGED DURING THE SURVEY PERIOD WITH GIVEN NUMBER OF POST-OPERATION
RECORDED DAYS, BY HOSPITAL AND TYPE OF ADMISSION

HOSPITAL	TYPE OF ADMISSION	POST-OPERATION RECORDED DAYS																																	PATIENT DAYS INVOLVED		
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		33	34
Christchurch	Emergency	-	3	3	2	4	-	3	6	3	3	1	-	1	-	-	2	1	2	1	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	333
	Waiting-list	-	4	2	4	3	3	2	8	11	2	7	4	1	3	3	-	-	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	499	
	All	-	7	5	6	7	3	5	14	14	5	8	4	2	3	3	2	1	3	1	1	-	-	-	-	-	1	-	3	-	-	-	-	-	-	832	
Princess Margaret	Emergency	-	3	2	1	3	2	6	3	2	1	1	3	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	213
	Waiting-list	-	8	2	5	3	1	6	7	4	4	4	1	2	2	1	2	1	1	1	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	489	
	All	-	11	4	6	6	3	12	10	6	5	5	4	3	2	1	2	1	1	1	-	-	1	2	1	-	1	-	1	-	1	-	-	-	-	702	
Burwood	Emergency	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
	Waiting-list	-	-	-	-	1	2	9	1	2	2	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	216	
	All	-	-	-	-	1	2	10	1	2	2	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	222	
ALL	Emergency	-	6	5	3	7	2	10	9	5	4	2	3	2	-	-	2	1	2	1	1	-	-	2	-	-	1	-	1	-	-	-	-	-	-	552	
	Waiting-list	-	12	4	9	7	6	17	16	17	8	11	6	3	5	4	2	2	2	1	-	1	1	-	1	-	1	1	3	-	-	-	-	-	-	1,204	
	ALL	-	18	9	12	14	8	27	25	22	12	13	9	5	5	4	4	3	4	2	1	1	1	2	1	-	2	1	4	-	-	-	-	-	-	1,756	

TABLE 19 NUMBER OF PATIENTS DISCHARGED DURING THE SURVEY PERIOD WITH GIVEN NUMBER OF POST-OPERATION
RECORDED DAYS CONTINUOUSLY IN DEPENDENCY CATEGORY 1 BEFORE DISCHARGE, BY HOSPITAL AND TYPE
OF ADMISSION

HOSPITAL	TYPE OF ADMISSION	POST-OPERATION RECORDED DAYS																										PATIENT DAYS INVOLVED		
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		26	27
Christchurch	Emergency	12	7	6	2	3	2	1	1	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
	Waiting-list	15	11	6	2	4	4	3	7	2	3	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	218
	All	27	18	12	4	7	6	4	4	8	4	3	1	1	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	318
Princess Margaret	Emergency	5	7	4	5	-	3	4	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	94
	Waiting-list	6	8	11	5	6	8	5	2	1	1	1	-	2	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	266
	All	11	15	15	10	6	11	9	2	1	1	2	-	2	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	360
Burwood	Emergency	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
	Waiting-list	-	-	-	-	2	3	7	4	1	-	1	-	1	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	185
	All	-	-	-	-	2	4	7	4	1	-	1	-	1	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	190
ALL	Emergency	17	14	10	7	3	6	5	1	2	-	1	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	199
	Waiting-list	21	19	17	7	12	15	15	13	4	4	3	1	3	-	1	-	-	-	1	-	-	2	1	1	1	-	-	-	669
	ALL	38	33	27	14	15	21	20	14	6	4	4	1	5	-	1	1	-	1	-	1	-	2	1	1	1	-	-	-	1

TABLE 20 NUMBER OF PATIENTS DISCHARGED DURING THE SURVEY PERIOD WITH GIVEN NUMBER
OF POST-OPERATION RECORDED DAYS CONTINUOUSLY IN DEPENDENCY CATEGORY 2
BEFORE DISCHARGE OR BEFORE BEING IN CATEGORY 1, BY HOSPITAL AND TYPE OF
ADMISSION

HOSPITAL	TYPE OF ADMISSION	POST-OPERATION RECORDED DAYS																					PATIENT DAYS INVOLVED	
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21
Christchurch	Emergency	8	4	2	2	7	1	1	3	-	3	1	-	2	-	-	-	1	1	1	-	-	1	207
	Waiting-list	14	9	7	5	4	5	5	3	4	2	-	-	-	2	-	-	-	-	-	-	-	-	206
	All	22	13	9	7	11	6	6	6	4	5	1	-	2	2	-	-	1	1	1	-	-	1	413
Princess Margaret	Emergency	8	7	2	1	3	4	2	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	89
	Waiting-list	17	14	7	6	4	1	1	3	2	1	-	-	-	-	2	1	-	-	-	-	-	-	162
	All	25	21	9	7	7	5	3	5	2	1	-	-	-	-	2	1	-	1	-	-	-	-	251
Burwood	Emergency	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Waiting-list	11	5	3	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	31
	All	11	6	3	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	32
ALL	Emergency	16	12	4	3	10	5	3	5	-	3	1	-	2	-	-	-	1	2	1	-	-	1	297
	Waiting-list	42	28	17	11	9	7	6	6	6	3	-	1	-	2	2	1	-	-	-	-	-	-	399
	ALL	58	40	21	14	19	12	9	11	6	6	1	1	2	2	2	1	1	2	1	-	-	1	696

TABLE 21 PATIENT DEPENDENCY FOR VARICOSE VEINS OF LOWER EXTREMITIES (CODE 460)
BY TYPE OF ADMISSION AND RECORDED DAY

[illegible]

TABLE 22 PATIENT DEPENDENCY FOR ACUTE APPENDICITIS (CODE 550) BY TYPE
ADMISSION AND RECORDED DAY

ADMISSION	RECORDED DAY										TOTAL DAYS
	1	2	3	4	5	6	7	8	9	10	
EMERGENCY	-	OP	-	2	2	1	1	1	1		9
EMERGENCY	OP	-	-	-	-	1	1	1			8
EMERGENCY	OP	-	1	1							4
EMERGENCY	OP	2	2	2	2	1	1				7
EMERGENCY	OP	2	2	2	2	2	1	1	1		9
EMERGENCY	OP	2	2	2	2	2	2	1			8
EMERGENCY	OP	2	2	2	2	2	2	1			8
EMERGENCY	OP	2	2	1	1	1					6
EMERGENCY	OP	2	1	1	1	1					6
EMERGENCY	OP	2	2	2	1	1	1				7
EMERGENCY	OP	2	2	1	1	1	1				7
EMERGENCY	OP	2	2	2	1	1	1	1			8
EMERGENCY	OP	2	2	1	1	1	1	1			8
EMERGENCY	OP	2	1	1	1	1	1				7
EMERGENCY	OP	2	2	1	1	1	1				7
ALL											109

TABLE 23 PATIENT DEPENDENCY FOR HERNIA OF ABDOMINAL CAVITY (CODE 560) BY TYPE OF
OF ADMISSION AND RECORDED DAY

TYPE OF ADMISSION	RECORDED DAY																		TOTAL DAYS
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
W. LIST	1	1	OP	2	2	2	1	1	1	1									10
W. LIST	1	1	OP	2	2	1	1	1	1	1									10
W. LIST	1	1	OP	2	2	2	2	1	1	1	1	1							12
W. LIST	1	1	OP	2	2	1	1	1	1	1	1								11
W. LIST	1	1	OP	2	2	2	2	2	2	1	1								11
W. LIST	1	1	OP	2	2	1	1	1	1	1	1								11
W. LIST	1	1	OP	2	2	1	1	1	1	1	1								11
W. LIST	1	OP	2	2	2	2	2	2	2	2	2	1							12
W. LIST	1	1	OP	2	2	2	2	2	2	2	2	1							11
W. LIST	1	1	OP	3	3	2	2	1	1	1									10
W. LIST	1	1	OP	3	3	2	2	3	2	1									10
W. LIST	1	1	OP	2	2	2	1	1	1	1									10
W. LIST	1	1	OP	2	2	2	2	1	1	1									10
W. LIST	OP	2	2	2	2	2	1	1											8
W. LIST	1	1	OP	2	1	1													7
W. LIST	1	1	1	OP	2	2	1	1	1	1									10
W. LIST	1	1	OP	2	2	1	1	1	1										9
W. LIST	1	OP	2	1	1	1	OP	4	3	3	2	2	2	3	2	2	2	1*	32
W. LIST	1	1	OP	2	2	1	1	1	1										9
EMERGENCY	OP	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	1	18
ALL																			232

* This patient was in hospital for 32 days.

TABLE 24 EQUIVALENT NUMBER OF PATIENTS IN HOSPITAL DURING THE SURVEY PERIOD BY HOSPITAL, DEPENDENCY CATEGORY AND DAY OF WEEK

HOSPITAL	DEPENDENCY CATEGORY		DAY OF WEEK							
			MON	TUES	WED	THURS	FRI	SAT	SUN	ALL
Christchurch	1	Mean	32.5	34.4	31.4	28.6	25.8	23.5	27.3	29.1
		Range	15-54	18-54	15-54	15-48	12-39	6-48	9-48	6-54
	2	Mean	41.0	37.6	39.2	39.9	40.8	38.5	39.0	39.4
		Range	18-66	27-54	30-54	24-54	30-54	21-57	21-57	18-66
	3	Mean	12.0	12.6	13.6	13.2	14.1	12.8	12.8	13.0
		Range	3-24	6-18	6-18	3-21	3-24	3-18	3-21	3-24
	4	Mean	.5	.7	.5	1.4	1.2	.8	.8	.8
		Range	0-3	0-9	0-3	0-3	0-6	0-3	0-3	0-9
	All	Mean	86.0	85.4	84.7	83.1	81.9	75.5	79.8	82.3
		Range	66-114	69-108	63-108	60-102	57-99	45-87	48-105	45-114
Princess Margaret	1	Mean	31.8	29.0	30.5	27.2	27.7	25.8	32.3	29.2
		Range	18-48	21-51	21-39	9-39	12-39	12-42	18-48	9-48
	2	Mean	16.0	16.8	17.3	21.0	20.3	18.8	18.5	18.4
		Range	9-27	3-30	0-27	9-30	9-33	9-33	12-24	0-33
	3	Mean	11.0	12.3	11.3	11.1	9.7	10.5	8.8	10.7
		Range	3-18	3-21	3-21	3-30	0-21	3-24	3-18	0-30
	4	Mean	3.3	5.7	4.4	2.5	2.1	2.5	3.3	3.4
		Range	0-6	0-12	0-9	0-12	0-6	0-6	0-6	0-12
	All	Mean	62.1	63.8	63.5	61.8	59.8	57.5	62.8	61.7
		Range	42-78	48-75	51-75	48-75	42-75	33-72	42-75	33-78
Burwood	1	Mean	13.6	16.8	17.1	12.9	12.2	14.1	14.5	14.5
		Range	6-24	12-30	9-30	3-30	6-21	3-21	3-24	3-30
	2	Mean	6.2	6.7	6.5	6.7	8.8	7.8	6.2	7.0
		Range	3-12	3-12	3-12	3-12	3-18	3-18	3-12	3-18
	3	Mean	-	.2	.2	1.6	.5	.2	.2	.4
		Range	-	0-3	0-3	0-6	0-3	0-3	0-3	0-6
	4	Mean	-	-	-	-	-	-	-	-
		Range	-	-	-	-	-	-	-	-
	All	Mean	19.8	23.8	23.8	21.2	21.4	22.2	21.0	21.9
		Range	9-33	15-39	15-39	12-39	12-33	9-33	9-33	9-39
ALL	1	Mean	78.0	81.3	79.3	68.3	66.3	61.9	73.6	72.7
		Range	51-117	60-114	54-111	39-99	39-84	42-90	48-108	39-117
	2	Mean	63.3	61.3	63.5	68.0	70.0	65.2	63.5	65.0
		Range	39-87	42-81	42-90	45-90	57-90	45-84	39-81	39-90
	3	Mean	23.0	25.0	25.0	26.3	24.3	23.7	22.1	24.2
		Range	12-30	15-36	18-33	15-39	12-39	18-30	15-33	12-39
	4	Mean	3.3	6.5	5.0	4.3	3.5	3.5	4.1	4.3
		Range	0-6	0-21	0-12	0-12	0-12	0-9	0-9	0-21
	ALL	Mean	167.5	174.0	172.8	166.8	164.0	154.4	163.4	166.1
		Range	138-204	150-204	153-195	147-192	129-186	123-171	138-195	123-204

(i) The above values are obtained by taking 3 times the sample values.

(ii) The values for "all" do not necessarily agree with the corresponding totals.

TABLE 25 EQUIVALENT BEDS IN USE DURING THE SURVEY BY PERCENTAGE OCCUPANCY, HOSPITAL AND TYPE OF ADMISSION

HOSPITAL	TYPE OF ADMISSION	PATIENT DAYS	EQUIVALENT BEDS AT GIVEN OCCUPANCY		
			100%	90%	85%
Christchurch	Emergency	1,413	48.2	53.5	56.7
	Waiting-list	1,020	34.8	38.7	40.9
	All	2,433	83.0	92.2	97.6
Princess Margaret	Emergency	826	28.8	32.0	33.9
	Waiting-list	932	32.5	36.1	38.2
	All	1,758	61.3	68.1	72.1
Burwood	Emergency	79	2.6	2.9	3.1
	Waiting-list	586	19.3	21.5	22.7
	All	665	21.9	24.4	25.8
ALL	Emergency	2,318	79.6	88.4	93.7
	Waiting-list	2,538	86.6	96.3	101.8
	ALL	4,856	166.2	184.7	195.5

TABLE 26 EQUIVALENT BEDS IN USE DURING THE SURVEY IN PERIODS MEASURED BY STATE OF DEPENDENCY, BY TYPE, NUMBER AND PERCENTAGE

PERIOD BY STATE OF DEPENDENCY	PATIENT DAYS	EQUIVALENT BEDS AT 100% OCCUPANCY		
		TYPE	PERCENTAGE	
Category 1 in excess of one day immediately after admission	286	Convalescent	9.8	5.9
Category 1 for one day (pre-operation where applicable) to fourth day in Category 2	2,593	Acute	88.7	53.4
Remaining days in Category 2	664	Convalescent	22.7	13.6
Category 1 for one day at end of stay	295	Convalescent	10.1	6.1
Category 1 in excess of one day immediately prior to discharge	1,018	Convalescent	34.9	21.0
ALL	4,856		166.2	100

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